

PATENT  
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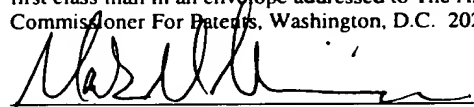
First Named Inventor: Levitan  
Application Number: 09/544,799  
Filing Date: April 7, 2000  
Title: Magnetically Actuated  
Microelectromechanical Systems Actuator

Date of Amendment: February 5, 2002

Examiner: Shafer, R.  
Art Unit: 2872

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**PETITION FROM REQUIREMENT FOR RESTRICTION**  
**37 CFR 1.144**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Applicants hereby petition from the requirement for restriction made final by the Patent and Trademark Office action dated November 30, 2001.

Claims 1-38 are in the application. In the Office action dated July 12, 2001 the Examiner restricted the application to one of the following groups of claims:

- I. Claims 2-4 and 10
- II. Claims 6-8
- III. Claim 9
- IV. Claims 11-16
- V. Claims 17-23
- VI. Claims 24-30
- VII. Claims 31-38

Claims 1 and 5 were not restricted. Claim 1 was cited as linking Groups I, II, and III, and claim 5 was cited as linking Groups II and III. In a response dated August

17, 2001, applicants elected the claims of Group I, together with claims 1 and 5, with traverse.

For the reasons set forth below, applicants submit that the claims of Groups I-IV and VII are directed to a common invention and that restriction between these groups and unrestricted claims 1 and 5 is improper and unsupported and should be withdrawn. Applicants also submit that the claims of Groups V and VI are directed to a common invention and that restriction between these groups is improper and unsupported and should be withdrawn. Applicants further submit that the restriction between the claims of Groups I-IV and VII and the claims of Groups V and VI is improper and should be withdrawn.

Groups I-IV and VII

Applicants submit that the restriction requirement is based upon an improper characterization of combination/subcombination claim relationships to which restriction is applicable. The combination/subcombination relationship relates to claims as a whole, such as a claim AB<sub>br</sub> and a separate claim B<sub>sp</sub>, as illustrated at MPEP 806.05(c)(I). All the claims in Groups I, II, and III, depend from independent claim 1. In the notation of the MPEP, the claims in Groups I, II, and III may be represented as AB, (AC)D, and (AC)E, respectively, where A represents independent claim 1, C represents dependent claim 5, and B, D, and E represent the subject matter of respective Groups I, II, and III.

None of the dependent claims of Groups I, II, and III is directed to a stand-alone subcombination claim (e.g., only "B" or "Bsp") with respect to another claim. The dependent claims of Groups I, II, and III are instead related to each other as proper species of a generic claim 1.

The Examiner specifies in the 11/30/2001 Office action that the claims of Group I are a subcombination of the claims of Groups II and III. The Examiner characterizes the relationships between Groups I, II, and III as:

Group III (ABD) – Group I (Bsp)

Group II (ABC) – Group I (Bsp)

Applicants submit that the Examiner's characterization of the claims of Group I ignores the dependent relationship of the claims to independent claim 1 in effect omitting from the claims of Group I the features recited in base claim 1. Specifically, the Examiner refers to the claims of Group I as being directed to "(1) a substrate having first and second conductors, (2) a first conductive coil, and (3) a magnet with particular coils details (Bsp)." As a consequence, the Examiner reduces the combination of features recited in the claims of Group 1, which necessarily include the features of base claim 1, to a characterization that references only the specific features recited in the dependent claims of Group I.

Such an omission of the features recited in base claim 1 from the characterization of the claims in Group I considers only parts of the claims of Group I, rather than considering those claims in their entirety. Dependent claims (such as those in Group I) only have meaning when read as a whole, incorporating all features from all base claims to which the dependent claims refer. Hence, the claims of Group I properly include all the elements of base claim 1. In contrast to the Examiner's characterization, applicants submit that the claims in Groups I, II, and III are properly represented as AB, (AC)D, and (AC)E, respectively, where A represents independent claim 1, C represents dependent claim 5, and B, D, and E represent the subject matter of respective Groups I, II, and III, which also depend from claim 1. The claims in none of Groups I, II, and III represents a subcombination relative to the claims in the other Groups.

#### Claim 5

Moreover, claim 5 has been improperly withdrawn. No restriction requirement has been made as to claim 5. In the absence of a restriction requirement as to claim 5, applicants elected the claims of Group I, together with claims 1 and 5. Nevertheless, claim 5 has been withdrawn from consideration. Applicants submit that there is no basis for a restriction requirement as to claim 5, as indicated below, and that withdrawal of claim 5 from consideration is improper for lacking any supporting basis or rationale.

Applicants note that claim 5 depends from claim 1. Claim 5, like the claims of Groups I, II, and III, cannot be and is not a subcombination claim relative to claim 1 or to the claims of Groups I, II, and III. In the absence of any restriction requirement being made between claims 1 and 5, and the erroneous basis for the restriction requirement between Groups I, II, and III, applicants submit that claim 5 should not be subject to restriction relative to claim 1 or the claims of Groups I, II, and III.

Independent claim 11 of Group IV recites a microelectrical mechanical actuator having a planar substrate, first and second coil members, and a magnetic flux means. Claim 5, for which no restriction has been made relative to claim 1, recites a microelectrical mechanical actuator having a planar substrate, first and second coil members, a magnet, and magnetic fluxes. Accordingly, the claims of Group IV are related to claim 5 and should not be subjected to restriction relative to claim 5. Applicants submit, therefore, the restriction requirement of Group IV relative to Groups I, II, and III is improper and should be withdrawn.

Independent claim 31 of Group VII recites a microelectrical mechanical actuator having a planar substrate, first magnetic-material member providing a first magnetic flux, and an electromagnet providing a second magnetic flux. Applicants submit that the subject matter of claim 31 and dependent claims 32-38 is analogous to that of unrestricted claim 5. Accordingly, the claims of Group VII are related to claim 5 and should not be subjected to restriction relative to claim 5. Applicants submit, therefore, the restriction requirement of Group VII relative to Groups I, II, and III is improper and should be withdrawn.

For the foregoing reasons, applicants submit that the claims of Groups I-IV and VII are directed to a common invention and that restriction between these groups and unrestricted claims 1 and 5 is improper. Applicants request withdrawal of the restriction requirement between the claims of Groups I-IV and VII and unrestricted claims 1 and 5.

Groups V and VI

Independent claim 17 of Group V recites a mirror actuator device having a first and a second actuator, a mirror, and a magnetic flux source. Independent claim 24 of Group VI recites a microelectrical mechanical system actuator for moving a mirror having a planar substrate, a plurality of actuators, a magnetic flux source, and a first and a current source. With regard to the restriction requirement between Groups V and VI, applicants submit that the subject matter of independent claim 17, and its dependent claims, is analogous to the subject matter of independent claim 24, and its dependent claims. The claims of Groups V and VI are directed to combinations of actuators, mirrors, and magnetic flux sources. The claims of Groups V and VI are not related to each other or any other claims as combination/subcombination. The Examiner has made no indication what claim recites the combination of which Groups V or VI is purportedly a subcombination. Applicants submit, therefore, the restriction requirement with between Groups V and VI is improper and should be withdrawn.

All Claims

With regard to the restriction requirement between Groups V and VI, and the other claim Groups, applicants submit that the subject matter of Groups V and VI is analogous to the subject matter of Group III. The claims of Groups V and VI are directed to combinations of actuators, mirrors, and magnetic flux sources, as are the claims of Group III. As indicated above, the claims of Group III are not directed to a stand-alone subcombination claim (e.g., only "B") that is otherwise included in claim 1, or any other claim. Similarly, the claims of Groups V and VI are not directed to a stand-alone subcombination claim (e.g., only "B") that is otherwise included in any other claim. Applicants submit, therefore, the restriction requirement with regard to of Groups V and VI, relative to the other claim Groups, is improper and should be withdrawn.

Fore the foregoing reasons, applicants request withdrawal of the  
requirement for restriction.

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Respectfully Submitted,



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